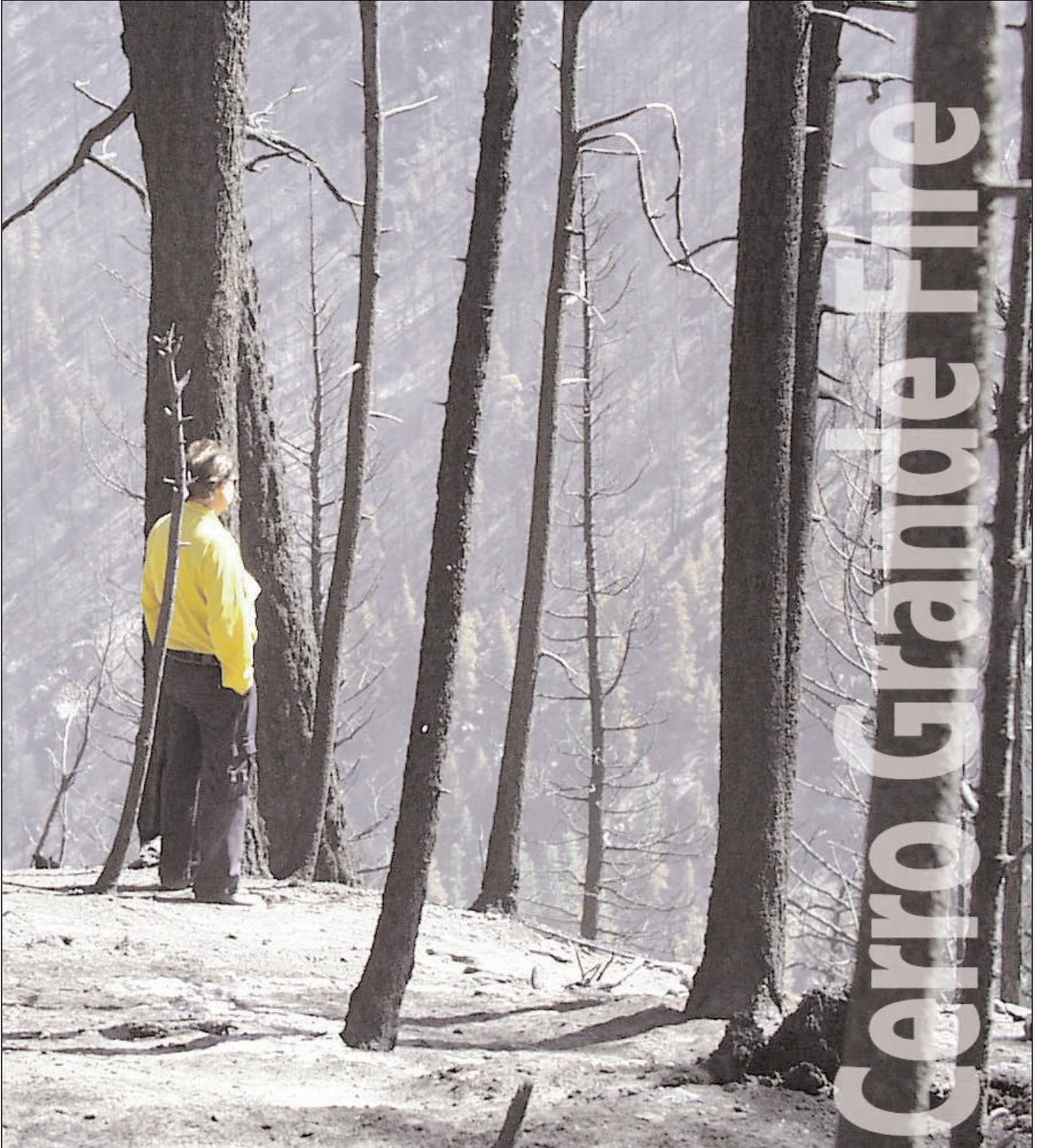


# Reflections

Los Alamos National Laboratory

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Cerro Grande Fire

A Department of Energy/University of California Laboratory

## About the cover ...

Los Alamos Fire Department Chief Doug MacDonald reflects on the damage to Los Alamos Canyon from the Cerro Grande Fire. Photo courtesy of the Los Alamos Fire Department

## Inside this issue ...

Fire impacts  
Lab research . . . . . **Pages 4 and 5**  
A worst-case scenario comes true . . . . . **Pages 8 and 9**  
Lab's neighbors show their generosity . . . . . **Pages 12 and 13**  
History burning . . . . . **Page 16**

# Reflections

Reflections, the Laboratory monthly publication for employees and retirees, is published by the Public Affairs (PA) Office. The staff is located at TA-3, Building 100, and can be reached by e-mail at [newsbulletin@lanl.gov](mailto:newsbulletin@lanl.gov), by telephone at 7-6103, by fax at 5-5552 or by regular Lab mail at Mail Stop C318. The individual telephone numbers are listed below.

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## editor's journal

### Searing memories

The Cerro Grande Fire seared its way into our memories, as well as into official documents, media accounts and history books. In this special issue of "Reflections," we're focusing on the fire with an emphasis on the personal recollections of those who were involved, directly and indirectly.

There are many stories — from the heroic to the puzzling to the humorous to the downright weird — and we'll all be telling them for years. Some you may have heard; others will be new. All of them present a perspective on the biggest disaster to hit this community and Laboratory.

Some of the accounts were written by the Public Affairs staff, but most were written by the people involved. Unfortunately, we didn't have the space to use them all, but we hope to capture a flavor of the Cerro Grande stories with this sampling.

In addition to personal recollections, the issue includes a story about the support we have received from our neighbors.

Their generosity has been overwhelming, and we can only give an overview of it. We have run several stories in the Newsbulletin on other examples of this outpouring of needed assistance, and we'll continue to do so.



*"When I went out to the evacuation shelters and saw how many people, both from the Laboratory and from the communities, had volunteered their time to help with people who were in need, it was very, very impressive ... I think we found out that our neighbors care a lot about us."*

—Director John Browne

*"The bottom line is: We will recover from this and we'll be an even better Laboratory."*

—John Browne

We also report on the fire's impact on scientific research, an impact that will become clearer in the coming weeks and months, and on the continuing threat that comes from being located in a relatively arid pine forest. Finally, we take a look at the loss of some historic buildings to the fire.

The Laboratory, and the community, will not soon forget the Cerro Grande Fire. Thanks to everyone who shared his or her personal memories with us.

*Kathy*

# FIRE STORIES

## 'Burnadette' finds a home

I was involved in the rescue of a newborn elk that was found abandoned near TA-60 a few days after we returned to work. It all began when Kathy Hirons of the Communications, Information and Computing (CIC) Division Office was out on a walk during lunch. On the first leg of the walk, she saw a mother elk with her newborn baby, but the mother looked stunned and disoriented. On her return, Kathy noted that the mother had fled and the baby had fallen and could not move. I was asked to help find a resource to help the baby.

After a few calls, I talked with Bob Anderson and his wife Cathy, who are volunteers for the Wildlife Rehabilitation Center in Española. Cathy and Bob picked up the elk within a half-hour of my call. The baby elk rode to the center on Cathy's lap.

According to Bob and Cathy, the abandoned female elk was only four to five hours old. Her umbilical cord was torn and her navel was open and full of dirt and soot. They found tracks indicating that the mother headed back into the burned forest, and they speculated that the mother might have been wounded or burned during the fire and could not take care of her baby.

The treating veterinarian cleaned and bandaged the wound and fed the baby. The Wildlife Center staff named her Burnadette. At last report, she was doing well and will be returned to the forest when she is old enough. She has a boy friend at the center who is approximately one week older and who also was rescued from the Cerro Grande Fire.

—Sheila Riedel, Staffing (HR-5)

Burnadette



## Guardian angels and trash can lids

Lou and Lee Pierotti believe in guardian angels. They have about a dozen of them. The Pierottis, who lost their home in the Cerro Grande Fire, had collected Hummel plates and small white angels made in the same German town, plus memorabilia from the days when Lou was part of the Pierotti's Clowns, a comedy softball team known all over the Southwest. Their son, Mike, now of Business Planning and Budgeting (BUS-3), was the batboy.

While poking through the ashes, Lou found three trash can lids that the team had used for mitts on occasion, and there were some ceramic stars from a Christmas Prayer wreath. But the most beautiful of all — they found the little angels that had been packed in their original boxes. The boxes were gone but, once the soot had been blown off, the angels were as shiny as ever.

"We think that's a miracle," Lou said. The Pierottis regard them as guardian angels, since they have found a place to live and their family is safe. In fact, Lou gave one to a friend who seemed to need a guardian angel of his own.

—Faith Stephens

## 'A strong sense of duty'

John Ruminer, deputy director for the Engineering Sciences and Applications (ESA) Division, was stationed in the Lab's Emergency Operations Center at Technical Area 59 from the very beginning.

"My most memorable day was on Wednesday, May 10. Three firefighters came into the EOC and said they had pulled all assets away from the fire front and that the fire had jumped Los Alamos Canyon," Ruminer said.

"Winds were blowing about 50 miles per hour and one of them said, 'Tonight the fire will do whatever it wants to do. We could lose the Western area, North Community and maybe 60 percent of the town by tomorrow morning.'"

For the people in the EOC that heard that, about half of them realized that could be their homes. There was a hush in the normally chaotic center, and then people started working again.

"It's a real testament to the people in the EOC," Ruminer said. "They had a strong sense of duty."

—Kathy DeLucas

# Fire spares major facilities, but impact is far from minor

by Todd Hanson

Last May, the Cerro Grande Fire roared across the forested slopes of the Jemez Mountains, onto Laboratory property and into the community of Los Alamos. As residents of Los Alamos and White Rock fled from their homes, millions of people around the world watched and waited as the Laboratory faced the largest wildfire in recent New Mexico history. When it was over, Los Alamos emerged singed and smoky. Thankfully, no one at the Lab or in the community was seriously hurt or killed. Still, the impact of the fire on science at the Laboratory was severe.

The fire caused more than \$300 million worth of damage to the Laboratory and burned more than 8,000 of its 27,000 acres. Thirty-nine structures — mostly small storage buildings, but also several trailers that had served as offices — were destroyed in the blaze. Miles of power and communications lines that traverse the 43-square-mile research complex were severely damaged. Smoke and soot crept inside buildings. Hundreds of desktop computers may need replacement because of smoke damage.

At several sites the fire came dangerously close to buildings, leaving the sensitive scientific instruments inside dusted with soot. In one building, where fast chemical reactions are studied, several million-dollar laser systems were damaged after the office trailer next door burned. The cost to clean the instruments will result in both direct cleaning expenses and valuable research time lost.

The daily research work of much of the Laboratory fell behind schedule



**The Cerro Grande Fire destroyed several trailers at TA-46 where about two dozen staff members and postdoctoral employees had their offices.**

*Photo by Margery Denton, Imaging Services (CIC-9)*

during the fire and is still recovering. For instance, the timetable for the restart of the Los Alamos Neutron Science Center's (LANCSE) Lujan Scientific User Center changed. Although the only fire damage LANSCE experienced was to a sign across from the facility entrance, the shutdown and smoke cleanup delayed critical work. The Lujan Center had planned to begin operations about the time the fire hit the Lab.

Operations at DARHT, the Dual-Axis Radiographic Hydrodynamic Test facility, also were affected when fire ravaged the surrounding forests and destroyed storage structures containing high-technology parts intended for use in the second phase of the DARHT facility construction.

There was, of course, some irreparable damage done by the fire. Scientific research work stored on at

least 20 personal computers was consumed by the blaze. The research work conducted by two postdoctoral scientists on Laboratory fellowships was lost when their office trailers went up in flames. These losses, in particular, have serious career ramifications for the individuals, since postdoctoral research often is used to help the Laboratory and other potential employers decide whether to hire scientists when their fellowships end (see story on Page 5). Another Los Alamos staff member's work — eight years of unclassified work on polymers — was lost as his office burned to the ground. These losses, and others like them, are devastating for the individuals and costly to the Laboratory.

The response of Los Alamos scientists to the fire has been to turn to what they know best — science. And many are contributing to the recovery.

Scientists working on the Multispectral Thermal Imager, a joint project of Los Alamos and Sandia national laboratories and the Savannah River Technology Center sponsored by the Department of Energy, inaugurated the scientific-data development stage of its three-year mission by providing pictures of the fire-ravaged Los Alamos area. The MTI images, scheduled to be shot on a continuing basis as the vegetation returns, will be shared with Laboratory and multi-agency teams to help analyze the burn area, the region's ground cover and potential flood-mitigation efforts currently under way.

In addition to MTI, members of the GENetic Image Exploitation, GENIE,

*continued on Page 5*

# 'I was prepared for computer failure, but not for fire'

by Kay Roybal

Physical Chemistry and Applied Spectroscopy (CST-6) was hit hard by the Cerro Grande Fire — a large fraction of the group's staff lost offices when trailers at the canyon's edge in Technical Area 46 burned — but it's already getting back on its experimental feet.

Within CST-6, Victor Klimov's small research team, which focuses on femtosecond spectroscopy and nanochemistry, was especially affected. Four postdocs and a graduate research assistant lost the contents of their offices, sometimes representing years of work.

"All of our projects have been affected to some degree," Klimov said. "But the damage is particularly critical to the postdocs. This is what they have chosen to do, but they have deadlines on their work and have lost at least six months. I hope we will be able to extend their fellowships into the next fiscal year."

Brett Kraabel, one of the postdocs in Klimov's group, accidentally left his personal laptop computer in his office on the Friday before the fire started. When his office burned, he lost every trace of the paper he had been working on.

"It took Brett one month to rewrite the paper," Klimov said. "He worked very hard, and all he had was the raw data."

## Laptop lab

by Todd Hanson

When the Cerro Grande Fire closed the Laboratory, Los Alamos scientists quickly created what some have called "a laptop lab in exile" at the Santa Fe Institute. The private, non-profit think tank in nearby Santa Fe provided a temporary home away from home for 10 to 15 Los Alamos researchers.

The Institute provided computer hardware, software and access to work stations, but many researchers simply brought their own laptop computers. SFI network administrators put these laptops on the institute's network to establish high-speed computer links with the Lab.

This connection allowed scientists to access the Laboratory's unclassified lab computers. During the fire, they were able to work on their unclassified research and stay in contact with other researchers from the Lab scattered across the state. A scientific seminar originally scheduled for the Laboratory was relocated to SFI.

Perhaps most importantly, SFI gave Los Alamos researchers accustomed to working ceaselessly on scientific projects a place to work among peers who could offer emotional and intellectual support.

Jennifer Hollingsworth, another postdoc, lost her entire library of textbooks and nearly two full file drawers of papers, material she had accumulated over the past eight years, including lab logbooks. A synthetic chemist using colloidal methods to prepare quantum dots, Hollingsworth said the loss of lab notebooks is particularly onerous in her field.

"Synthetic chemistry is a lot like cooking," she said. "As you do experiments, you write little details down in your notebooks about what works and what doesn't. Losing that kind of information can be devastating."

Postdoc Alexandre Mikhailovski lost notebooks containing 80 percent of his experimental data from the past 18 months, work related to studies of energy relaxation processes and optical properties of semiconductor quantum dots. The data lost included the evidence of discovery used for a patent application. Lost logbooks also contained data affecting a series of experiments conducted in cooperation with external collaborators.

"My lab notebooks were locked in a drawer in my office along with my computer backups," said Mikhailovski. "I was prepared for computer failure, but not for fire."

Klimov said the team has started experiments on two laser systems out of four the group uses, but will need to replace another laser that was damaged in the fire. "Our division office has been enormously helpful," he said. "I can't say enough about [CST Division Director] Al Sattleberger and [Deputy Division Director] Carol Burns and how they have stood behind us in our recovery efforts. ... We are on our way back to being fully functioning."

Elsewhere in CST-6, computers, books, research notebooks and drafts of research papers were among work lost by other staff members and students. For instance, Joanna Casson lost all copies of what would have been her master's thesis, as well as the research notebooks she would need to reconstruct it. Laura Foster lost some textbooks and copies of journal articles. "These were books we found that looked whole," she said, "but when you touched them, they fell apart because the organics were all baked out of them."

Staff member Laura Smilowitz is a potter, and her burned-out office contained several of her pieces. "They obviously got up to kiln temperature," said Foster, "because the glazes remelted."

## Fire ...

*continued from Page 4*

project team at the Lab are using GENIE's image-processing and analysis technology to analyze aerial and satellite images to generate high-resolution burn and vegetation maps for the U.S Forest Service-led Burned Area Emergency Rehabilitation team.

In other areas of the Laboratory, scientists are applying their scientific and technical knowledge toward environmental restoration, using mapping and wildfire modeling technologies. Other researchers are working on better methods to model, plan for and even prevent future disasters like the Cerro Grande Fire.

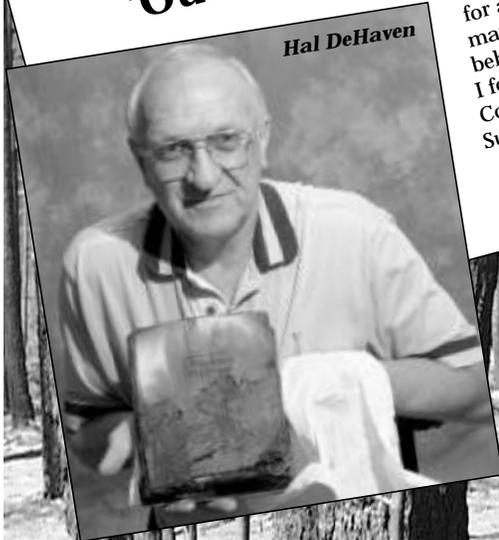
# FIRE STORIES

## 'Outdoor Survival' survives

I was sifting through the ashes of our home, looking in particular for any of my school books that may not have burned. Lo and behold, under one pile of rubble I found one! Its title: "The Complete Book of Outdoor Survival." I thought, how ironic!

—Hal DeHaven,  
National High-Magnetic Field Lab

Hal DeHaven



## A long journey

When Bill Wilson of Nuclear Physics (T-16) and his wife Betty evacuated their home on Barranca Mesa, they made quite a caravan. She and their daughter took a car, Bill drove the motor home and son Alan was driving a topless '73 Blazer. It was very orderly. They arrived at the a friends' driveway in White Rock where they parked the RV and proceeded to settle down. At least for a few hours. Then came the word to evacuate White Rock.

Again, they piled into their vehicles and began the procession all over. Betty drove straight up Meadow Lane and on down to Santa Fe. Bill decided he would have better luck if he went the Bryce route and Alan took his chances on Grand Canyon. Bill had the cell phone, so Betty called from Totavi to check on progress. Bill was stalled in White Rock. She continued on and reached Santa Fe about two hours after she started.

Bill's journey took over four hours and Alan was still not out of White Rock by 6 a.m. His trip took just about six hours. Betty still contends it's the same old story — if men would only ask directions.

—Faith Stephens

## 'What fire?'

Like most others in town, along with those who had been evacuated on May 7, things were getting pretty stressful for us by the morning of Wednesday, May 10. It was really looking like a full evacuation might really happen, and my husband and I were as prepared as we thought we could be.

As early as Monday, we basically decided on what things we'd most like to save in the event of an evacuation and started packing some of these items. We also planned to have my mother, who is a resident of the Sombriello Nursing Facility, with us if we evacuated, and I made sure to get some of her personal things and had them packed and ready also.

So much for being calm and organized. After I got the word from the pharmacy clerk at Furr's (I was calling in a prescription) that the entire town was to evacuate and they were closing the store immediately, I started to panic and proceeded to make my husband panic. He is usually very calm, but now he too started to go into "panic mode." As I was gathering up some last minute things, he was wrestling with our cat, who was hissing and biting, as he tried to get her into the cat carrier. In the confusion, we forgot the very important videotape of our entire home as well as our treasured ancestral photo gallery.

The trip down to Albuquerque was like a bad dream. My husband drove the packed truck along with our cat in the cat carrier, and I drove our packed car along with my mother. My mom was very confused and insisted that the fire was a plot by some enemy or else it was an exercise by the Lab to see how long it would take to evacuate our town. I tried to explain that it was a regrettable plan for a controlled burn, but, after some time, I decided to agree with her.

The following morning, our son-in-law's parents, who operate the Kritter Gitters in town, joined us after having been evacuated from White Rock. Our daughter has a cat and a dog, and we, of course, had our cat along. Then, we added, along with two more people, their dog, their cat, their pet skunk, their pet raccoon, nine rescued baby raccoons, two rescued baby rabbits and five chickens and two grown rabbits rescued from the Western area. We almost had a goat, but it ran away; it was found again after the evacuation.

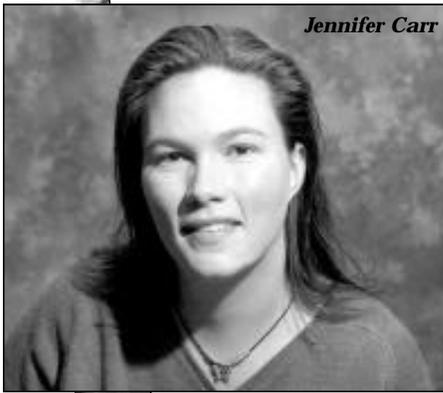
Gradually, the humans and critters that didn't live in Albuquerque returned to Los Alamos. We helped my mom get settled into her spot at Sombriello. Afterwards, when we were leaving her, I said something about the fire and how devastating it was now going to be for a lot of people. My mom asked, "WHAT FIRE???"

—Jeanne Brueggeman, Occupational Medicine (ESH-2)

## So, what do you really think of the National Park Service?

My boyfriend, Brent, and I own a unit of a quad in the northern area. On Sunday, May 7, county officials evacuated the western part of town, as close as two streets from where we live. We packed the cars on Sunday night, expecting to be told to leave either late Sunday night or Monday afternoon.

Jennifer Carr



Just before 1 p.m. Wednesday our neighbor called us outside to show us the New Mexico State Police officers that were lining up at our corner. We had pulled a few items out of our car (dog food, toiletries, etc.) that we needed during the three days that

we were not evacuated, so I went back inside to start gathering these when the phone rang. The conversation went something like this:

Me: "Hello?"

Caller: "Hello. My name is Mathilda and I'm calling from Northern Arizona University. Your number was randomly selected to be part of a survey for the National Park Service."

Me: Silence

Caller: "Would you mind answering a few questions for us?"

Me: "Uhhhhhhh ... I guess." (In my heightened state of panic, it did not occur to me that I could say NO.)

She started asking me a few questions like "When was the last time you visited a National Park?" and "Did you take a guided tour?"

After a few questions, I stopped.

Me: "You know, this is really ironic, but do you know where you are calling?"

Caller: "No, where?"

Me: "Los Alamos, N.M. In fact there is a big forest fire raging as we speak and we could be evacuated at ANY MOMENT!"

Caller: Pause. "Oh yeah. I've heard about that." I think I made her a bit nervous. I'm not sure whether she thought I was making this up to get off of the phone with her or whether I was serious and was about to yell at her. She kept on with her survey.

"Did you and your party buy anything at the concession stand?"

"Did you attend a nature presentation?" Finally, the sirens started blaring and the bullhorns screaming. Evacuation time.

Me: "Uh ... I think I'm going to have to cut this short. They are evacuating us right now."

Caller: "Oh, OK. When do you think would be a good time to call you back?"

Was she serious? Assuming I have a home to come back to and a phone that rings ...

Me: "Uh, Monday maybe?"

I could not believe the full and complete irony of the situation.

Fast forward to Friday, May 19. We had just been allowed back into our home (no, it did not burn), and Brent and I were trying to figure out what damage had been done, trying to figure out what we needed to do and trying to simply absorb all that had happened the last two weeks. Then the phone rings.

Me: "Hello?"

Caller: "Is this Jennifer Carr?"

Me: "Yes."

Caller: "Hi. This is Valerie calling from Northern Arizona University to continue the survey concerning the National Park Service."

Me: Complete shock. "Huh, we just got back into our home. Maybe this isn't the best time."

Caller: "You're not the one from Los Alamos, are you?" She watched the news.

Me: "Yes, it is."

Caller: Gasp. "Mathilda told us about you! She said she could hear the sirens in the background! Then the inevitable "How are you?" and "How terrible" and "How tragic."

We laughed about the coincidences that brought her and her colleague to my phone number twice in a horrible two weeks. Remember, these are college students conducting a school project. They have nothing to do with the fire, the evacuation or the National Park Service, for that matter. I can't imagine the nasty comments and angry words she has had to deal with through all of the reports of controlled burns-turned-wildfires. Feeling for her uncomfortable position, I took a few minutes to finish the survey, passing on questions on which I might be a little biased.

Caller: "What do you think the Park Service management could do better to enhance your experience with the National Parks?"

Me: What I wanted to say was: How about not burning down towns where national parks are so that locals can still visit them once in a while! and How about actually taking the steps to CONTROL a controlled burn! What I said was: "Pass."

With due respect to those families who have lost their homes, I hope others find the humor (entertainment?) through this story that I have certainly found.

—Jennifer Carr, Occupational Medicine (ESH-2)

# A worst-case scenario comes true

by John A. Webster

A 1997 Laboratory survey of combustible material in the forests around Los Alamos suggested the following scenario as the most likely pattern for a wildfire.

- A ground fire starts between April and July in a forest above 8,000 feet elevation and smolders or burns lightly for one to four days.

- Four days later, increasing temperatures and wind speeds, plus decreasing humidity, fan the flames into “ladder fuels,” or undergrowth and smaller trees, that carry the fire to the tops of bigger trees, creating a crown fire.

- Since the prevailing winds at this time of year are from the southwest to the northeast, the crown fire spreads from the mountains to the western perimeter of the Laboratory and the Los Alamos town site.

- On days five through eight, the fire rages through the forest canopy, and firefighters are unable to halt it. “LANL would be closed and the town site population would be evacuated. Destruction of residential areas and LANL facilities would be highly likely...”

- On day nine, the weather conditions moderate, allowing firefighters to conduct safe, effective fire suppression. This activity continues for another day, then mop-up activities take another week.

Sound familiar?

The 1997 study could have been a blueprint for the Cerro Grande Fire, which raced through the forest, the town site and parts of the Lab in May. The fire leveled the homes of about 400 Los Alamos families, forced the first major closure of the Lab in its history and destroyed the offices, computers and data of about 60 employees. Yet such a fire, and its probable consequences, had been predicted and a wildfire mitigation program begun.

“After the [1996] Dome Fire, we did a preliminary study in 1997 to identify the fuel load in this area,” said Randy Balice of Ecology (ESH-20), who published the results of the collaborative study with Brian Oswald of Stephen F. Austin State University in



Texas and Charlie Martin of the U.S. Forest Service in Santa Fe.

“The results showed that fuel levels, and thus the fire danger, were greatest in the ponderosa pine and mixed conifer forests,” Balice said. “We found dense trees in many areas. The data suggested a ‘worst-case scenario’ that we described, and that’s essentially what happened in the Cerro Grande Fire.”

The survey, “Fuels Inventories in the Los Alamos National Laboratory Region: 1997,” along with other warnings from scientists and wildfire professionals, was not ignored. The Forest Service funded a more detailed fuel-load study, which recently was published. In addition, the Laboratory and other land management agencies used the information, and other research results, as part of a program to mitigate the wildfire threat.

“The Laboratory had become increasingly aware of the need to manage the forests to reduce the threat from wildfire by thinning dense strands of trees, especially along our western boundary,” said Diana Webb, ESH-20 group leader. “The work of Randy and other researchers confirmed that these areas were most likely to burn.”

The Dome Fire, which burned some 17,000 acres on Bandelier National Monument and came close to the Laboratory, led to the formation of the Interagency Wildfire Management Team, composed of representatives of the Laboratory, the Department of Energy, the Forest Service, Los Alamos County, the National Park Service, San Ildefonso Pueblo, state government agencies and other interested parties.

The team reviewed the causes of the Dome Fire and the existing fire threat,  
*continued on Page 9*



**These photos of "open" and "closed" stands of trees were taken recently in the Jemez Mountains. In the photo of an open forest at left, the trees have been thinned and the underbrush cleared. In the photo above, the dense underbrush and small trees create a fuel ladder for flames to reach the crowns of bigger trees.**

Photos by Terry Foxx, ESH-20

*continued from Page 8*

then established a program to reduce the fire danger. The program included thinning trees along State Road 501 on the southwestern boundary of the Laboratory and in the canyons below Technical Areas 59 and 55, creating firebreaks, conducting the first-ever controlled burn on Lab property, and holding workshops and hearings to raise public consciousness.

"I think what we did made a tremendous difference [during the Cerro Grande Fire]," said Webb, chair of the IWMT. "We know that the work we did helped save TA-59 and buildings at S-Site [in the southwestern corner of Lab property]."

The IWMT, whose members have met every other week for four years, will continue to operate. "We have to continue managing areas already thinned and identify other areas," said Webb. "Most areas of the Lab still have a tremendous fuel load. We can't

be complacent. There's still a high risk to the Lab from wildfire."

That risk results in part from the type of vegetation in the area, the local climate and the likelihood of ignition. Most of all, it results from the past 100 years of human activities.

Terry Foxx of ESH-20, who has studied the impact of fire in the area since the La Mesa Fire burned some 15,000 acres in Bandelier National Monument in 1977, said studies of tree rings had shown that fires occurred about every five years between 1797 and 1893 with a major fire every 20 years.

This fire pattern helped create and maintain a mosaic of open and dense stands of pine interspersed with small meadows. When a fire occurred, its intensity was generally low enough to avoid damage to the growth tissues of established trees, and it cleared away undergrowth, smaller trees and debris. The result was an "open" forest with trees spaced relatively far

apart and grass and sedges growing between them.

The pattern changed in the 1890s as a result of human activities, Foxx said. Livestock grazing, homesteading and logging altered the fire cycle. Then, fire suppression halted the natural role of fire in the forest. The result was dense forest of many trees per acre, from 100 to 1,000, and a denser undergrowth of ladder fuels. The trees were smaller and less healthy than they had been in the past, and their crowns interlocked.

After 1893, there were no large-scale fires until 1977, when La Mesa Fire broke out. Since then, the La Mesa, Dome, Lummis, Oso and Cerro Grande fires have burned some 80,000 acres on the Pajarito Plateau, and the Laboratory and community are not yet out of the woods, literally and figuratively.

"We chose to put the Laboratory and the town in the middle of a ponderosa forest, and we chose to put them in a fairly remote, inaccessible place," said Webb. "It's up to us to recognize the consequences of those choices.

"We need to understand that the operation of the Laboratory is dependent in large part on how we manage the forest. We need to evaluate the forest fire risk as a condition of operations."

In addition to continuing to thin trees to 50-150 per acre with 10-25 feet between crowns, Webb said the Lab needs to take the forest fire risk into account when planning new facilities and to recognize the danger posed by certain types of buildings such as wooden transportables.

"We've learned that we need to continue our efforts to reduce the risk from wildfire," she said. "We can't forget this lesson. We have to respect the forest."

In the next few years, the blackened trees will topple and grass and brush will grow on the hillside west of town. Despite the present appearance of the forest near town, people are optimistic about the future.

"The forest has a miraculous ability to recover," Foxx said. "There's a lot of hope. Even though we won't have trees for 100 years, it'll come back. It won't be the same, but it won't always be black."

# FIRE STORIES

## 'How to care for your orchids during an evacuation'

Lois Dauelsberg of Tritium Science Engineering (ESA-TSE) says members of the Escalante Orchid Society got some unexpected assistance in assessing the damage to their favorite plants in greenhouses and helping them recover. As a result, she developed the following prescription for "How to Care For Your Orchids during an Evacuation."

OK, you're exiled from home. Your relief in knowing your house has survived gradually changes to a realization that the power has been turned off for days, so there's no ventilation in the greenhouse. The humidifier also needs electricity. Your precious orchids are hot and dry, far from their usual tropical lifestyle. They need watering. What to do? Panic! When you calm down, lay out a tactical plan.

1. Sneak in the back way. Maybe Rendija Canyon is still open. Maybe you can hike part of the way. On the other hand, the police are patrolling heavily. You'll probably get arrested! Abandon this approach.

2. Work through the "powers that be." Call the Information Line and try to get in. First, tell them how many orchids you have and how long it's been since they were watered and that they have no ventilation. Prepare to be turned down. Plants have no rights during an evacuation, even orchids.

3. Next, call and tell them how much your orchids are worth. This has possibilities. Money talks. Prepare to be turned down anyway.

4. Repeat step 3, upping the value each time until the figure approaches the national debt. If this doesn't get results, keep embellishing. Explain that you have irreplaceable endangered species, hoping that you've reached a conservationist. Repeat until you give up or finally succeed. Then proceed to step 5.

5. Stop at Pojoaque gym to pick up your assigned National Guard escort. Drive to your house, water your parched orchids and breathe a little easier. Basically, they look good. Get your new personal heroes to pose for a photo, noting that their camouflage uniforms blend with the décor of your private jungle.

Thanks to the members of the Air National Guard who helped Los Alamos residents in so many ways, especially those who helped care for our greenhouses.



## Bridge clubs bid their hearts

The Los Alamos Duplicate Bridge Club is a vibrant organization with more than 100 members, many of whom compete against other bridge players across the state and at regional and national tournaments. This has led to lots of acquaintances and friendships that have been clearly evident over the past few weeks.

While evacuated, I was reading e-mail at the Santa Fe library when I came across a memo saying that the members of the Albuquerque bridge club had decided to help and at an afternoon game had raised over \$500. This quickly grew to over \$1,500. Somehow, members of that bridge club learned that there was a need for toys. I was called to come and get the check for the bridge club cash donations and to "bring a truck because we have lots of toys for you."

And that's not all. The El Paso Bridge Club, totally on its own, held a Los Alamos benefit game and raised over \$600. We've received money from bridge players in Denver and elsewhere, and there was a second truckload of toys. The American Contract Bridge League, headquartered in Memphis, also has contributed to the people of Los Alamos.

As I wrote in the regional bridge newspaper, "After a steady diet of terrible news on TV, it's terrific to know that what we see there is not a true reflection of what people are and can be."

—Jerry Fleming, Telecommunications (CIC-4)

## A 'firetrap' is eliminated ... unfortunately

A few weeks before the fire my mother came into my room attempting to deliver some laundry she had just finished. I was, however, in the midst of studying for Advanced Placement exams, and my room was not the neatest it could have been. There were papers and books all over every inch of floor.

In frustration, my mother threw down the clothes and stormed out the door. As she was leaving she turned back and yelled, "This room is a firetrap! Clean it up before you go anywhere!"

When we found out officially that our house was gone, my mom came into my new room crying and apologizing for calling my room a firetrap. "I didn't really mean that," she lamented.

—Leah Gardner, UGS, Public Affairs (PA)

# FIRE STORIES

## From Russia with concern



РОССИЙСКИЙ ФЕДЕРАЛЬНЫЙ ЯДЕРНЫЙ ЦЕНТР

РОССИЙСКИЙ ФЕДЕРАЛЬНЫЙ ЯДЕРНЫЙ ЦЕНТР

Dr. JIMM BROWNE  
LANL DIRECTOR  
1425 ALAMOS,  
NEW MEXICO,  
USA. 87545

Dear Dr. Browne,

The staff of Russian Federal Nuclear Center-VNIIEF are deeply concerned about the most distressful situation that has befallen the Los Alamos community and Laboratory with the unprecedented forest fire.

Alarmed and hopeful, we keep following the tragic events now happening in Los Alamos, the sister city of Arzamas-16. We are aware that the firemen and E.A.N.E. people are combating the force of nature for the sake of Laboratory and the town.

Over the years of our Labs working productively together, a lot of VNIIEF personnel have been able to find colleagues, acquaintances and friends among Los Alamos people. That is why nobody here feels about what happened like someone else's disaster. Through TV and radio we are tracking how things are going, and our wholehearted sympathy is with you.

May we express our assurance that the wild and unrelenting force will be defeated in the shortest time by top-class American specialists, and look forward in the time all people of Los Alamos are back home and at work again.

With trust and hope for the best,  
sincerely yours,

Roddy Ilkayev,  
Director, RFNC-VNIIEF

## The view from Vienna

I am on an extended leave of absence with an appointment at the International Atomic Energy Agency in Vienna, Austria. My wife Sarah and I still own a house in Los Alamos and maintain connections with Los Alamos colleagues and friends via e-mail. It was very difficult watching news on the Internet showing the fire approaching and then entering our hometown when we were so far away and could do nothing but watch. We worried about friends and our house.

We were very grateful to a number of Internet sources. The KRSN site was a good source of information, especially pictures. The Albuquerque Journal gave very good overall coverage. Of particular note was the people-finder on the Web that gave locations and phone numbers for evacuees when available. Whoever organized and ran the registration did a terrific job.

We were able to locate several friends and communicate either via e-mail or by phone. In some cases we heard good news from friends; in some cases we heard about total loss. It was difficult being so far away, but through the Internet services we were able to maintain contact with people.

—Bob Clark

## Out of sight, but not out of mind

Retiree Eppie Trujillo Sr. and his wife Becky were in Branson, Mo., with 41 others at the time of the evacuation and for a while had reason to believe their home was gone.

"We thought there wasn't much we could do here, and at least we had a place to sleep and something to do, so we thought we might as well stay and see some shows to take our minds off the fire," Trujillo said.

When they arrived at the Albuquerque airport Friday, May 12, much to their surprise, the Trujillos found that their home on Fairway Drive was undamaged except for smoke and the food in their freezer. And they aren't complaining about having to empty the freezer and clean the rugs!

—Faith Stephens

# Lab's neighbors show their generosity

*"After the verb 'to love,' 'to help' is the most beautiful verb in the world."  
—Australian novelist Bertha Von Suttner*

**Editor's note: One of the best memories from the Cerro Grande Fire was the overwhelming generosity of Los Alamos' neighbors. Help came from towns and pueblos, corporations, media outlets, organizations that help people in need as well as other organizations and citizens who responded from the heart. We realize that we can't mention them all, but this article provides a sense of the scope of the response that began as the fire moved into town and that continues today.**

by Steve Sandoval

When an out-of-control forest fire burned through Los Alamos in May, leaving hundreds of families homeless and causing millions of dollars in damage to homes and Laboratory property, an outpouring of help unprecedented in Los Alamos' short but illustrious history sprang forth.

From communities near and far, individuals and businesses donated food, money, clothing, housing, grief counseling and support. Money, in-kind donations and other offers of support continue to come in today.

"I think [the support] reflects what we've always known; that Northern New Mexicans are generous, especially with in-kind and donated goods and with their time volunteering," said Chris Olivera of the Laboratory's Community Relations Office (CRO) and the Los Alamos Recovery Network.

The Recovery Network, chaired by Olivera and Mary Pat Kraemer of Los Alamos County, includes about 40 federal, state and local social service agencies and nonprofit organizations in Los Alamos, Albuquerque and Santa Fe. Its main focus is disaster recovery.

"I've been very impressed with the depth of support that these service providers and their volunteer boards — many which are made up of Lab employees — have provided, not only in the emergency response stage, but

in the recovery that we're into now," said Olivera.

He noted that the Salvation Army in Santa Fe has 1.5 million pounds of donated goods for fire victims. The Recovery Network still is looking for warehouse space to help store some of these donations, he said.

The story's the same for the Food Depot of Santa Fe, which received more than 2 million pounds of food. The donations came so fast and furious that a former Albertson's grocery store was borrowed from the building owner to store donated items; when that building was filled, the Food Depot rented storage buildings off Santa Fe's Airport Road.

Microsoft Corp. employees in Phoenix, watching national news accounts of the devastation, also wanted to help, so the company worked with Los Alamos National Bank and Compaq to donate \$5,000 and 11 computers. The \$5,000 went into an account at the bank that was set up to help 19 Computing, Information and Communications (CIC) Division employees and their families whose homes were severely damaged.

"We have a longstanding relationship with Los Alamos National Lab," said Gary Willman, general manager of Microsoft's Southwest District.

"When something like this happens, we can't help but personalize it. We work with individuals in this community and we want to do our part in helping everyone through this difficult time."

Ohkay Casino at San Juan Pueblo and Pojoaque Pueblo's Cities of Gold Casino opened up their doors to firefighters, emergency officials and families left homeless, while numerous hotels offered discounted rates for Los Alamos and White Rock families displaced from their homes.

Even the television and radio stations that for a time provided nonstop coverage of the fire came to Los Alamos' aid. Citadel Communications, which owns and operates eight radio stations in Albuquerque, and KOAT Channel 7 raised \$141,000 for fire relief efforts; the funds were turned over to the New Mexico American Red Cross.

KOB Channel 4 set up an account with the Bank of Albuquerque to collect financial donations. Through the end of June, more than \$425,000 had been donated; the TV station provided \$25,000 in seed money to kick off the fund drive and also collected food and household items; Federal Express donated its trucks to deliver these donations to Los Alamos.

Ellen Welker, community relations manager for KRQE Channel 13, said the station raised \$250,000 through a Bank of America account. The station

*continued on Page 13*



**This sign, propped against a fence at the Los Alamos Airport, says it all.**  
Photo by Ed Vigil

continued on Page 12

also provided 10,000 men's suits donated by Pioneer Wear, an Albuquerque business that was closing.

"When human tragedy hits, there's no question that we as human beings will reach out and help others," Welker said, noting that proceeds from a one-hour cassette the station produced about the fire are being donated to the Salvation Army in Santa Fe.

Other examples of support:

- Smith's Food and Drug centers in Albuquerque and the Bernalillo County Fire Department coordinated a drive to collect bottled water, cotton socks, sunscreen, eyedrops and eyewash for firefighters. "The firefighters said 'that's exactly what we needed,'" said KRQE's Welker.

- Roadrunner Trucking of Albuquerque volunteered staff to transport collected items from Albuquerque to Los Alamos.

- Country music singer Randy Travis and his wife staged and performed in a benefit concert at the Santa Fe Opera that raised about \$250,000.

- Catholic Charities of New Mexico and the Immaculate Heart of Mary Church in Los Alamos provided case management for families affected by the fire, counseling and financial assistance, both to parish members in Los Alamos and in the greater community. The Archdiocese of New Mexico and Catholic Charities also have raised \$325,000 in donations for the fire relief effort.

- Pojoaque school officials canceled school for several days to allow the high school gymnasium to be used as a Red Cross shelter. Outside the gymnasium, the U.S. Postal Service set up a temporary post office where Los Alamos and White Rock families could receive their mail and take care of regular postal business.

- Santa Fe High School's Activity Center also was mobilized as a Red Cross shelter; classes at the school were called off for several days during the height of the fire.

- Judith Kerr Prather, a Los Alamos High School graduate who is now a psychologist in Los Angeles, worked with the Federal Emergency

Management Agency after the fire. She arrived in Los Alamos with about \$10,000 in pledges from Rotary Clubs in Southern California. The Rotary Club of Los Alamos plans to use the money to pay for fencing for new trailer homes with small children or pets.

- The Los Alamos Family YMCA never shut down during the fire, said Executive Director Linda Weeks. When National Guard personnel were mobilized, the "Y" was used as the guard's headquarters and cafeteria. Emergency personnel, fire relief workers, state patrolman and Federal Emergency Management Agency personnel could use the facility to take showers.

- The fire displaced hundreds of pets, many of which had to be relocated to Santa Fe. Kate Rindy, executive director of the Santa Fe Animal Shelter, said more than 700 pets — ranging from dogs and cats to parrots, geese and parakeets to ferrets and rats — were brought for safekeeping to the Santa Fe Animal Shelter and a temporary boarding facility at the Santa Fe Rodeo Grounds. Help for animals also

came from the Humane Society of America, the American Humane Association, the New Mexico Horseman's Association and many veterinarians.

Nancy Bartlit of White Rock evacuated to Sandia Park east of Albuquerque. Bartlit recalled that when she stopped at a convenience store, bags and bags of groceries were collected at the front of the store; they were donated by Sandia Park residents, she said.

She also noted numerous locations around Albuquerque where businesses and churches advertised their facility for dropping off food and clothing.

"I was flabbergasted because we've been told that Los Alamos is the hill; there was a perception that Los Alamos was special and we're always walking on eggshells with the other communities," said Bartlit, a former county councilwoman. "When I saw this generosity I thought about the Oklahoma bombings and the way the community pulled together and the totality of the whole state helping one community."

## An unexpected shower

by Steve Sandoval

In the rush to leave Los Alamos when the Cerro Grande Fire overtook residential areas, Haje Korth of Space and Atmospheric Sciences (NIS-1) and his wife Tracie didn't pack up the nursery of their 36th Street quad home.

Tracie Korth is expecting to deliver twins this month and over the course of several months the Korth's had been planning for the twins by outfitting a nursery in their home.

"The nursery was basically complete. We bought all the furniture two weeks before the fire," said Haje Korth. "We had a stroller that we brought from Germany two years ago. We had more than 200 children's books we collected over the years; we had English and German books."

It all went up in smoke when their house burned, but thanks to an Albuquerque television station, the Korth twins will have all the niceties most newborns usually have.

When the Korths returned to Los Alamos, they checked in with the American Red Cross at the service center in the Canyon Complex, Haje Korth recalled. A Red Cross worker referred the Korths to a news reporter from KRQE Channel 13 seeking human interest stories. They told the reporter of their plight. Later the same day, the reporter called them and said, "If you have time, come to the parking lot of the Red Cross Service Center for a baby shower," Korth said.

"We showed up. When we got there there were people that we knew from work, parents of kids where [Tracie] worked. Also, some of my colleagues came. They brought gifts for us; later an ambulance came from Albuquerque bringing all kinds of baby items. It was amazing," said Korth.

"It was a really overwhelming feeling to see how all these people cared for us. It was amazing that all these people realized what happened to us, even though we didn't realize it for ourselves at that time."

# FIRE STORIES

## My personal hero

My husband and I were on vacation when our house burned down, and our 15-year-old son Jason, who was staying at home with a friend of ours, rescued all that we now own.

Before the evacuation, he kept our three cats in one room for three days so that he could find them quickly if needed. He also rescued our family pictures, our home videotapes and personal items that he thought our family (including our away-from-home college kids who were taking finals at this time) would want.

Having just received his driving permit, our son then drove to White Rock by himself in this emergency situation (thus saving one of our cars), then to Santa Fe later that night.

Although there were heroes too numerous to name during this trial by fire, my son was my personal hero.

—Lisa Rothrock, Communications Arts and Services (CIC-1)

## Acres of friends

Donna and Dale Osborn have about three acres and lots of friends. In fact, they have about three acres full of friends.

That was evident during the evacuation when Donna and Dale, who work in Systems Support (BUS-7) and Business Planning and Budgeting (BUS-3), respectively, issued a “Y’all come” as they left town. They were taken up on their invitation, and before it was over, there were about five units or families of varying numbers camped on their property in Arroyo Seco.

The atmosphere was so congenial that people kept wandering over from the casino to visit and walk their dogs. Most of these people were camping buddies anyway, so it lent a festive, relaxed air to things, except for the fact that they could see the billowing smoke of the fire.

Most stayed until Monday afternoon, when residents were allowed to return home, but a couple of families waited until Tuesday to avoid the rush. One person had lost her apartment and felt pretty low until she visited others while getting her mail. Things are returning to normal, but there will be a lot to talk about when the group goes camping again.

—Faith Stephens

## Spotting the flames from the air

Flying search and rescue missions in the mountainous terrain of Northern New Mexico has always been challenging but rewarding, and the training for Civil Air Patrol flight crews really came in handy during the fire.

Several members of the Los Alamos Squadron of the CAP flew missions during the Cerro Grande Fire to provide information, such as location, fire size and direction of movement, for state and federal agencies.

One mission really tested us. As the fire was burning towards the Baca Ranch, there was concern that it might top the ridge and enter the caldera. So two planes from our squadron were dispatched to obtain details and video of the hot spots.

I flew one plane, and 1st Lt. Ken Jones flew the other, which acted as our safety aircraft. The mission called for us to fly into the caldera, then circle around the fire to the west and return between the mountains and Los Alamos.

We knew this would be a very bumpy ride — and it was — and we expected poor visibility because of the smoke — and we had that, too. The most harrowing part occurred as we were flying at a low altitude along the border of a very hot part of the fire shooting video and getting exact locations to help the firefighting efforts. Part of the forest below and in front of us caught fire and exploded into a mushroom cloud filled with orange flame. I swerved hard to the right and then caught the downdraft part of the wind that was feeding the fire. We lost about 500 feet of altitude, but recovered and completed the mission.

This was the hardest flying I have ever done, and all of the pilots and crew in our squadron did an outstanding job. I am really proud of my colleagues.

—Jack Harris, Desktop (CIC-2)

## 'That's what we're here for'

At one point during the height of the Cerro Grande Fire, television stations in Albuquerque reported that Los Alamos High School was engulfed in flames.

The telephones at Los Alamos radio station KRSN rang off the hook, station owner Mark Bentley and sales/marketing manager Bob Clark recalled. "Every time the TV stations reported something happening, our phones would go crazy, people asking us what the real story was," Bentley said. "It told me they were relying on us to provide them accurate information."

Though outnumbered in terms of staff, the small station wasn't outdone in providing information for residents forced out of their homes and work. The station stopped regular programming on May 7, two days after the controlled burn was declared out of control. It didn't resume normal programming until May 23, said Bentley, who has owned the station since 1997.

"The decision to do what we did was not overtly made," said Bentley. "We didn't sit around and discuss it. We just did it. That's what we're here for," noting that KRSN also is Los Alamos County's official emergency radio station.

When KRSN lost power the evening of May 10 — the day the fire roared through portions of Los Alamos, prompting the evacuation — it moved to White Rock and broadcast from a makeshift location near its radio tower. When the order to evacuate White Rock was made early on the morning of May 11, Bentley and the KRSN crew went back to the downtown studios.

Clark recalled when television news reports claimed the high school was burning. "To our knowledge it hadn't," he said. "So we went out there and looked at it. We saw it had in fact been untouched, and we were able to report live, on air from personal observation."

Bentley said he never thought twice about what it would cost KRSN to suspend regular programming. "Like any other small business, we have to be profitable. We have to generate income," he said. "But there's an overriding belief that I have that if we don't serve the community the way the community deserves to be served, we don't have any right to be here."

"Yes, we are a commercial radio station. That is part of the reason we exist. But the bigger consideration is how we serve those people who rely on us."

—Steve Sandoval

## Doing whatever it took

I first returned to our house on Friday, May 12, two days after the firestorm went through Los Alamos and devastated the North Community, where my wife Connie and I have lived for 25 years. Several of us had permission to check out the computing buildings and infrastructure at the Lab; then I asked a policeman to escort a neighbor and me to 35th Street to check out our houses.

From the front of the house everything looked the same as when we were evacuated, but I was surprised to find the screen door locked. When I went into the back yard I was amazed to see that the fire had burned my shed and many trees and had come within several yards of my house. I went back to the front of the house and forced the screen door open. I saw a black footprint on my front door and discovered that a firefighter had kicked through the door and had dragged hoses over our living room rug to put out the fires in the back yard. Whoever it was had saved many of the trees in the back yard and had certainly saved our house.

I was home two weeks later over lunch hour working on some insurance claims when the doorbell rang. There was a young man with his son who introduced himself as Lawrence Lopez. He told me that he had graduated from high school with my oldest daughter and he was the firefighter who had saved my house — and with a crew of two others had saved many of the other houses on 35th Street.

Lawrence had come by to apologize for kicking through my front door since he discovered later that night that there was a gate that he could have gone through! I was elated to see him and his young son and assured him that I would always gladly sacrifice my door to save my house!

Lawrence described that horrible, fearful night with emotion that came from living in Los Alamos for his whole life. This is only one story of the incredible courage and determination and almost superhuman effort that firefighters from all around the state expended that night, but it is a very important story to Connie and me.

—Charlie Slocomb, Computing, Information and Communications (CIC-DO)

## How to get rid of an unwanted shed

Engine-1 Capt. Glenn Trehern, Firefighters Bryan Valdez and Kelly Grace-Meyer, and I were dispatched to a house on North Road because of a smoldering foundation. While mopping up the smoldering area, the family who had lived there arrived.

At first our crew was saddened due to the children starting to cry. But the father made a very funny comment to lighten the children's mood. He looked at his wife and said with a serious and concerned tone, "Honey, the shed is gone. I HATED THAT SHED!"

Immediately the family laughed along with the crew. Speaking for myself it was what I needed to put things into perspective. Here is a family that lost everything and can still laugh. It made me feel good again, and it also told me that this town would be OK. Humor is the best medicine of all.

—Driver Engineer Steven Mosley, Los Alamos Fire Department

spotlight

# History burning

by Todd Hanson

On May 11, while the Cerro Grande Fire was making history, it also was obliterating a part of Laboratory history. Five battered but historic structures where parts of the Trinity atomic bomb were assembled during World War II were destroyed by the fire.

The buildings, located in an area once known as V-Site, recently had been named an Official Project of the White House Millennium Council's Save America's Treasures program. V-Site represented one of the few clusters of buildings from the Manhattan Project era still standing at the Laboratory. The structures were classic examples of the simply constructed wooden buildings once used to usher the world into the nuclear age.

At V-Site, located in the heart of the current S-Site, the only structures remaining are a building called the Trinity Assembly Building and an adjacent utility building. It was in the assembly building that the shaped chunks of conventional high explosives were carefully fitted together in a daylong assembly marathon July 12, 1945. They were then lifted onto a flatbed truck and taken to Trinity Site in southern New Mexico for assembly with the nuclear materials. The Trinity Test on July 16 was the world's first explosion of an atomic device.

The five V-Site buildings consumed by the Cerro Grande Fire consisted of three storage sheds, a small backup casting and assembly building and a radiography building similar in design and construction to the assembly building that survived. The Army Corps of Engineers had constructed the buildings in 1944. None had been used since the 1950s.

Also lost or damaged in the fire were items that had been moved from the primary Trinity device explosives casting building before it was demolished several years ago. These items included the candy kettles used in the production of the devices high explosive charges, several light fixtures and specialized plumbing fixtures. The items had been stored in the buildings while awaiting possible shipment to a museum.



*The photo above shows the remains of one of the Manhattan Project-era buildings that was destroyed by the Cerro Grande Fire at what was once called V-Site. The surviving building in the back center is the Trinity Assembly Building. The photo below shows the fire-damaged candy kettles, which had been converted from their original purpose of making candy to the production of high-explosive charges for the Trinity Test device. Photos by LeRoy Sanchez*



**Reflections**

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